The Methamphetamine Crisis – News from the Front

Current update on identifying predisposing factors, issues with treatment, potential treatments and going forward

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Differences and similarities between Primary Opioid and Methamphetamine Users

- Opioid Users
  - 3 General Categories of Opioid users
    - Adolescent Experimentation – 5 - 10%
    - Pain Management – 25 - 30% (Health Care Provider initiated)
    - Mental illness – 80 – 90 % (anxiety, depression, bipolar, schizophrenia, PTSD)
  - Ongoing use related to
    - Ongoing untreated pain
    - Ongoing undiagnosed and thus untreated mental illness
    - Fear of withdrawal – Functional addicts – Likely the major reason

Differences and similarities between Primary Opioid and Methamphetamine Users

- Opioid Users
  - MAT (Medication Assisted Treatment) MUST involve addressing the mental health component – Dual Diagnoses
    - Failure to do so means the best outcome is less than 25% even if the rest of the program works perfectly.
      - Why are insurance companies paying for a 25% success rate ?
      - Failure to wean or even attempt weaning – perpetual addiction is unsupported by every known treatment entity.
        - Trading one addiction for another – Methadone/Suboxone
      - Giving a 30-day-supply (60 or more Suboxone)UNQUESTIONABLY means that the majority are diverted.
        - Ongoing reports of Methadone diversion sales via various methods
  - Abstinence vs MAT – Ongoing discussion with significant passions on both sides. Should the ultimate goal of MAT be…Abstinence?

Methamphetamine Use

- Why would anyone use Methamphetamine ?
  - Does not address pain ?
  - Less euphoria than Opioids (arguably unless higher doses are used and/or in chronic users.)
  - Presentation of purposeless activity, hyperactivity, and all the related issues that come with Meth use – “Tweakers”
  - Adolescent search for the next “high”?
  - When Opioids are not available, better anything than nothing.
  - Fear of withdrawal with no Opioids accessible means that they will use anything to alter their withdrawal symptoms.

Methamphetamine Treatment

- An extensive review of all available literature, web sites and “Expert” opinions all say the same thing to date…

No FDA approved pharmacotherapy/ies to treat Methamphetamine nor stimulant abuse. More, no specific medications have been found that show any effect on Methamphetamine users to reduce the incidence.

Methamphetamine Treatment

Recent program (Last Wednesday) by UCLA PhD on Methamphetamine and other stimulant addiction

No single drug therapies have shown significant promise

A concept called Contingency Management has shown early” success”. This basically amounts to bribing Meth users by offering them a gift certificate for providing a clean urine specimen each week.

Review of this treatment by limited number of my Methamphetamine clients demonstrated disbelief and discussions of how much would they need to comply.

Cutting to the chase…

There is no treatment for Stimulant addiction (Methamphetamine Addiction) as such nor is there every likely to be one.

Methamphetamine Use

- What are the results and findings of a 2-year history of treating Methamphetamine users with mental health, psychiatric intervention and pharmacotherapeutics ?

Methamphetamine Use

- **NEW CONSIDERATION**
  - **Identification of predisposing factors regarding Methamphetamine use**

- **NEW CONSIDERATION**
  - **Categorization of Methamphetamine users based on identified characteristics leading to use**

- **NEW CONSIDERATION**
  - **Treatment dedicated specifically at these predisposing factors**

Methamphetamine Users - Different

- Not all users of Methamphetamine do so for the same reasons.
- We have identified 2 major categories of Methamphetamine users that differ in etiology, presentation and perceived effect of Methamphetamine.
- These are radically different entities and have some overlap historically, but they diverge completely as these clients age.

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Early childhood behavioral issues frequently present
    - ADHD behaviors with/without a definitive diagnosis
      - Disruptive behaviors, agitation, poor attention spans, anger issues
    - This presentation changes markedly when they reach adulthood
    - They (more often than not) have related mental health issues
      - Anxiety, depression, poor self image

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - ADHD is a childhood disease state and arguably does not exist as such in the adult.
    - Societal, hormonal, physiologic changes means that those behaviors prevalent in children are not manifested in adults.
    - How many adults run around, scream, and kick chairs out from other adults ?
    - However, the internal stress created by ongoing behavioral issues and the internal chemical issues does manifest themselves.
    - As such, the use of Amphetamine based treatments such as Vyvanse, Adderal, Concerta, etc. are inappropriate since they do not address the true internal issues.
    - Nonetheless, giving a patient this diagnosis (ADHD) virtually assures they will seek an amphetamine cure from you.

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive/Anger Presentation
  - The major presentation of Category 2 Methamphetamine users is the recurrent, sudden, and/or progressive agitation, anger (friction wheel car).
    - This may last for minutes, hours with complete resolution frequently with minimal recollection of triggering events.
    - Causal factors can range from response to innocuous statements to external stimuli the client becomes aware of that propel them into this state
    - There is a “ramping up” of this that may or may not respond to outside attempts to resolve or mitigate the agitation.

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive/Anger Presentation
    - Usually self limiting when it resolves
    - Family and friends report that they avoid the client when they have these episodes and can easily identify when they will begin to occur.
  - This presentation is one of the major associated findings in Adult ADD as anger issues are a major part.
  - The Methamphetamine user reports their self-perception is that using Methamphetamine seems to reduce their anger/agitation both in frequency and intensity

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive Presentation
    - Avoidance by family and “friends” when these episodes occur
    - Can occur spontaneously with minimal “provocation”.
    - Can also be a “ramping up” of issues with slow increase until they explode.
    - May last seconds or minutes, rarely does it last for extended periods.
    - Subsequent poor recollection of the entire incident despite the victim's indignation, anger, response.
    - The Category 2 CAP client cannot understand why people are angry at them, they think their outbursts are low level, minimally intrusive and they tend to make light of them.

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive Presentation
  - ***No history or evidence of any issues regarding their ability to commence tasks, nor issues with arousal or energy.
    - These people readily will work, play, etc. until they have an inciting incident that is beyond their control to mitigate.
  - The history is the key to making this diagnosis.

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive Presentation
  - Treatment of Category 2 Methamphetamine Users (CAP)
    - DOES NOT involve use of stimulants (Adderal, Vyvanse. Concerta, Ritalin) despite client's pleas for this as treatment.
    - Treatment is based on addressing the underlying Adult ADD issues that lead to the anger.
    - Strattera (Atomoxetine) with starting dose of 40-60mg/day with increased dosing every 4 weeks based on response.
    - Tenex (Guanfacine) – with starting dose of .1mg/day with increase in dosing every 4 weeks based on patient response

Methamphetamine Use

- Category 2 – C.A.P. (10-20% of Methamphetamine users)
  - Chronic Agitated/Aggressive Presentation

  - IMPORTANT to realize that the client may/may not recognize a change in their behavior and presentation. It is important to identify a relative or close friend who can help them monitor their responses. It can be hard for a client to recognize improvement since they do not recognize when they have CAP. To them, agitation/anger/hyperarousal are all “normal”

Methamphetamine Use

- Category 1 –(80-90% of Methamphetamine users)
  - Early childhood behavioral issue but more intense and severe (subjective assessment).
  - Related mental health issues must be identified and addressed.
  - These users do not have issues with agitation, aggression, or anger.

Methamphetamine Use

- Category 1 –(80-90% of Methamphetamine users)
- Universal Primary finding is that this category of user's report:
  - Overall lack of energy
  - Difficulty commencing tasks, activities, even getting out of bed
  - When they can get their day started, they “peter out”
  - “My get up and go, got up and went”
  - They present with a “negativity” towards activity.

Methamphetamine Use

- Category 1 –(80-90% of Methamphetamine users)
  - Identification of their occupation (Example – Transmission Repair worker)
    - Scenario where the task is unreasonably herculean (50 transmission repairs in one day by themselves)
    - Category 1 users will respond with a negative demeanor regardless of the situation if it requires them to be active. Even when the numbers become more realistic)
    - Coercion, provision of alternatives all make little difference to the clients who will tell you that they can do it if they have Meth but otherwise, they cannot.

    - In contract, Category 2 will present with a positivity (“50 is a lot but I could probably do it if I had some help or a longer period”, “25 is a lot but I could probably get pretty close if they weren’t too difficult”, etc.

Methamphetamine Use

- Category 1 – (80-90% of Methamphetamine users)
- Based on this presentation, we have identified this category of users as:

  Low Internal State of Arousal (LISA)

Methamphetamine Use – Category 1
LISA

- Universal reports of “no energy”, caffeinated beverages, energy drinks, provide little to no resolution.
- They report problems sleeping, too tired to sleep.

- They crave stimulation, something to allow them to do what they have to do, work, interact, etc.

Methamphetamine Use – Category 1
LISA

These Methamphetamine users will report that when they use Methamphetamine, given the continuum from their baseline state to the level of what they would consider “Normal” to the level of “High” or “Euphoria”, that

“Methamphetamine makes me feel NORMAL”.

They report that use allows them to start their day, engage in ADL’s, get things done they need to (???) and more. That without it, they simply have no ability to do anything.

Interesting Considerations

- 2 clients not truly Category 1 or 2
- Increased work output – Case of dad with 5 kids and 5 childcare payment. Treatment based on counseling to understand that use of an illicit substance was not appropriate and had great risks
- Second client who used Meth simply because he liked how it made him feel, he liked the rush but had no issues with CAP or LISA.

Euphoria with Methamphetamine

- Reports of Euphoria came only from truly chronic users who reported they needed increasing does to achieve the same feeling of “Normal”

Methamphetamine Use – Category 1
LISA

Detrimental

- Financial – more often than not, catastrophic
- Detachment from surroundings
- Psychological/physiological dependence
- Belief that Methamphetamine use solves their problems through achieving “Normal” state.
- Unrealistic self-perception of resolving their issues

Methamphetamine Use – Category 1 LISA

Treatment of the Category 1 LISA

Based on review of available literature and comparing and contrasting the presentation of the patient population we encountered.

Goal was to identify appropriate medical therapy that corrected or “replaced” the missing “Arousal” component.

Issues with amphetamine use precluded their use as a consideration for treatment

Methamphetamine Use – Category 1 LISA

Treatment of the Category 1 LISA Client

Not surprisingly, these LISA clients will universally ask for stimulants at the first opening in the evaluation. They are all aware of the LISA state and will do anything to resolve it (i.e. Methamphetamine or legitimate stimulants).

Methamphetamine Use – Category 1 LISA

Treatment of the Category 1 LISA Client

Currently there are NO FDA approved medications for treatment and more, there has been little work done and reported publicly.

Numerous web sites report their expertise in treating Methamphetamine addiction with programming identical to Opioid addiction as the treatment other than Abstinence Programs. Suboxone for Meth ???

Numerous papers published with single medication regimens, limited populations and more, rare identification of/treatment of related mental health issues

Methamphetamine Use – Category 1
LISA

To date there has been nothing more than random attempts to look at possible treatments to mitigate Methamphetamine use with essentially no progress made towards any effect.

No attempts made nor literature reports looking at Meth user characteristics or predisposing factors. Are all Meth users created equal ??

Interestingly, Methamphetamine is categorized as a stimulant along with Cocaine and Spice (Not-Pot).

There is considerably more literature on cocaine then Methamphetamine abuse

Methamphetamine Use – Category 1
LISA

Recent correspondence with provider using Topomax to treat cocaine users who reportedly used cocaine to treat headaches – limited improvement in cocaine use

Again, the studies to date have been single drug, limited patient characteristics and no attempts to identify nor treat mental illness.

Sites offering treatment of Methamphetamine with no specifics on what they are using.

Methamphetamine Use – Category 1
LISA

Our experience:

Starting approximately May 2019, we started to see more PRIMARY Methamphetamine users in our SUD practice.

A search was commenced based on our early understanding of the etiologies of use and with respect to the histories being obtained which seemed to be repetitive with respect to CAP and LISA characteristics.

Methamphetamine Use – Category 1
LISA

Recognizing the issue was the “need for increased internal arousal”, discussions were undertaken with a Board-certified sleep medicine physician and a Board-certified Psychiatrist regarding non-amphetamine medications that enhanced arousal.

Several medications were identified and a literature search was performed which interestingly showed our choice of medications had been considered but no actual work with them had been done. One web site recommended these medications to help with Methamphetamine withdrawal but never actually noted they could be or were used in practice

Methamphetamine Use – Category 1
LISA

Current Protocol

Modafinil (Provigil) 100mg PO BID. Used to treat narcolepsy, shift workers syndrome and in MS patients. Resets the internal clock by changing the state of arousal.

Remeron (Mirtazepine) 15 mg at HS. Remeron belongs to a class of drugs called Antidepressants, Alpha-2 Antagonist

Methamphetamine Use – Category 1
LISA

Current Protocol

Recognizing that there may be prior exposure of clients to either of these with side effects or perception that the medication did not work (remembering No MAT, single drug therapy and many more potential issues), alternative medications were identified as potential substitutes.

Methamphetamine Use – Category 1
LISA

Nuvigil and Wakix (similar narcolepsy medications)

Single case of Nuvigil due to “allergy with Provigil”

Bupropion (Wellbutrin) – 100mg PO BID. This is an NDRI Norepinephrine-Dopamine reuptake inhibitor) not an SSRI/SNRI.

It boosts levels of norepinephrine and dopamine but action is not well understood

Outcomes to date

What has been our experience using this treatment protocol ?

Dual medication therapy along with mandatory MAT and treatment of identified dual diagnosis.

We elected to keep the Wellbutrin and Remeron use as the components of the Methamphetamine treatment and use other psychotropic medications when appropriate to treat the mental illness.

In essence, we keep the Meth protocol intact and separate.

Outcomes to date

We have achieved significant subjective (patient reported) resolution of cravings for Methamphetamine

Category 1 LISA patients reporting the energy they sought has been achieved using this protocol over the study period and periods in which we could obtain reports.

Category 2 CAP users reporting their agitation/anger episodes either markedly reduce in intensity and timing or completely resolved. This was confirmed by reports from “Significant others”.

These results are markedly notable at the 48-72 hour treatment mark across the board for both Category 1 and Category 2 Meth users.

Outcomes to date

Short and intermediate follow ups (2 weeks to 4 months) with objective findings of no evidence of Methamphetamine in UDS cups and Gas chromatography as well as reports of no cravings for Methamphetamine and no utilization.

However, much like Opioid treatment, these results are best in clients in monitored, controlled programs. Once these patients are in an environment they control, Meth use frequently resumes due to many factors.

Outcomes to date

Resumption of prior social affiliations

Resumption of prior patterns of behavior

Cessation of medications due to purposeful or inadvertent issues (loss of insurance, work schedule creating appointment inconvenience, self desire to do it ”on my own”, desire to not need medications, etc.

Like Opioid users, following them up after treatment and tracking to have solid outcomes data is simply not possible despite all attempts with few exceptions.

Outcomes to date

Issues for consideration

- Nature vs Nurture
- Brains that have developmental issues that are chemically based

- Is the solution simply replacement of aberrant chemicals vs correction of the aberrant chemical pathways

Outcomes to date

Issues for consideration

- Developmental patterning
  - Repeated activity creates an indelible pattern on the brain that is used as a framework on which other patterns/activities/behaviors are overlaid.
  - How do we disrupt/alter these patterns to allow for consistent and long-lasting change ?

Long term considerations

Comparator study of mental health/psychiatric care universally through all treatment arms with

(1) Provigil plus Remeron/Wellbutrin

(2) Provigil alone

(3) Remeron/Wellbutrin alone

(4) Mental health/psychiatric care alone

Long term considerations

If abstinence is based on major environmental changes (Nurture) and getting these people away from their patterns), then what happens when these abstinent client's re-access their prior patterns (work, driving by the same locations, cell phone contacts, etc.)?

Long term considerations

“Medication weaning”

Likely will reduce the Modafinil dose over a 6 month period

- 100mg and 50 mg/day x 2 months
- 50 mg PO BID x 2 months
- 50 mg QD x 2 months

Ongoing continuation of Remeron/Wellbutrin even with other psychotropic medications being taken.

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QUESTIONS

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